



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

5 Applicant(s): Kanevsky et al.
Docket No.: YOR920000049US1
Serial No.: 09/558,372
Filing Date: April 26, 2000
Group: 2666
10 Examiner: Kevin C. Harper

I hereby certify that this paper is being deposited on this date with the U.S. Postal Service as first class mail addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Signature: *Gene Mauro*

Date: January 20, 2006

Title: Method and Apparatus for Transmitting Data in a Packet Network

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APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

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Applicants hereby appeal the final rejection dated August 3, 2005, of claims 1 through 24 of the above-identified patent application.

REAL PARTY IN INTEREST

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The present application is assigned to International Business Machines Corporation, as evidenced by an assignment recorded on April 26, 2000 in the United States Patent and Trademark Office at Reel 010765, Frame 0430. The assignee, International Business Machines Corporation, is the real party in interest.

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RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

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Claims 1 through 24 are pending in the above-identified patent application. Claims 1-3 remain rejected under 35 U.S.C. §102(e) as being anticipated by DeSchrijver (United States Patent Number 6,311,042) and claims 1 and 4-24 remain

rejected under 35 U.S.C. §103(a) as being unpatentable over Pare, Jr., et al. (United States Patent Number 6,154,879) in view of Barrett et al. (United States Patent Number 5,917,835).

STATUS OF AMENDMENTS

There have been no amendments filed subsequent to the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed to methods and apparatus for transmitting data, such as biometric data or Internet telephone data, in a packet network (page 6, lines 9-15). Packets are split and interchanged prior to transmission across a packet network, such that packets that reach their destination may be processed, even in the presence of lost or delayed packets. Packets of biometric data, such as fingerprints, retinal scans or voice characteristics, are split, and optionally interchanged prior to transmission (page 6, lines 16-27). If some packets are lost or delayed, while some of the packets reach their destination and provide sufficient data for user identification, then the user may be authenticated without requesting the retransmission of the lost or delayed data. Sampled voice packets are split, and optionally interchanged prior to transmission. If some packets are lost or delayed, while some packets reach their destination, then the received speech samples may be reproduced without requesting the retransmission of the lost or delayed data (page 7, line 17, to page 10, line 9). A packet splitter splits framed data into a number of packets (page 7, lines 1-16). For example, the framed data is split into two packets with the first packet containing k frames having odd indexes and the second packet having k frames having even indexes (page 10, line 10, to page 16, line 5). If both packets arrive at a destination point, they can be integrated back into the framed data comprised of the continuous string of frames, $f_1, f_2, f_3, \dots, f_N$. Otherwise, if a packet was lost or significantly delayed, the data can be recovered from the single received packet using, for example, smoothing techniques, such as spline extrapolation, for the lost packets with even indexing (page 16, line 6, to page 18, line 6).

STATEMENT OF GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-3 are rejected under 35 U.S.C. §102(e) as being anticipated by DeSchrijver and claims 1 and 4-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Pare, Jr., et al. in view of Barrett et al.

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ARGUMENTIndependent Claims 1, 5, 7, 11, 12 and 15-24

Independent claim 1 is rejected under 35 U.S.C. §102(e) as being anticipated by DeSchrijver and independent claims 1, 5, 7, 11, 12, and 15-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Pare, Jr., et al. in view of Barrett et al. Regarding claim 1, the Examiner asserts that DeSchrijver discloses obtaining several biometric portions from the biometric data (col. 4, lines 20-24). In the Response to Arguments section of the final Office Action, the Examiner asserts that DeSchrijver discloses “verifying a signature of a user to determine the user’s identity (col. 6, lines 13-25, and lines 56-67).” In the Advisory Action, the Examiner asserts that DeSchrijver discloses biometric portions (“data packets contains parts of a signature”), and asserts that the features upon which the Applicant relies (i.e., the specifics of biometric portions or how they are selected or obtained) are not recited in the rejected claim(s).

The Examiner also acknowledges that Pare does not specifically disclose obtaining portions of the biometric information and transmitting them as packets, but asserts that Barrett discloses obtaining plural biometric portions from the biometric information (figures 3 and 4: item 62).

Appellants note that DeSchrijver is directed to systems and methods that provide communication systems that allow for the transmission of voice and data over a wireless network (see, Abstract). While DeSchrijver discloses the input of a signature, DeSchrijver does *not* address the issue of *biometric portions for identifying or verifying a user* and does *not* disclose or suggest that the signature contains a *plurality of biometric portions*. (For a detailed discussion of biometric portions, see United States Patent Application Serial Number 09/467,581, filed December 20, 1999, entitled “Methods and Apparatus for Restricting Access of a User Using Random Partial Biometrics,” incorporated by reference in the present disclosure.) Appellants note that data packets

that contain parts of a signature are *not biometric portions* in the context of the present invention and as required for proper operation of the invention, as would be apparent to a person of ordinary skill in the art.

Appellants note that Barrett is directed to a method and system for
5 *mitigating and compensating for loss of digital audio data* transmitted as a stream of packets to a client (see, Abstract). Barret teaches, for example, that

in accordance with the present invention, a method is defined for conveying digital audio data from a server to a client, so as to minimize errors. The method includes the steps of *dividing the digital*
10 *audio data among a plurality of temporally contiguous frames; each frame includes a successive portion of the digital audio data.* A plurality of packets is used for conveying the digital audio data from the server to the client. *Each packet includes a plurality of the frames interleaved in a predefined manner so that adjacent frames in each packet do not*
15 *contain temporally contiguous portions of the digital audio data.* The packets are transmitted from the server to the client. At the client, the frames included in the packets are deinterleaved, so that the portions of the digital audio data included in the frames are sequentially and temporally arranged in order.

20 (Col. 2, lines 18-32; emphasis added.)

Barrett does *not* address the issue of biometric information or *biometric portions for identifying or verifying a user*. Appellants also note that neither Pare nor Barrett disclose or suggest creating biometric portions from biometric information.

25 Regarding the Examiner's assertion that the features upon which the Applicant relies (i.e., the specifics of biometric portions or how they are selected or obtained) are not recited in the rejected claim(s), Appellants note that the features upon which the Appellants rely (biometric portions) are recited in the claims. The specifics of biometric portions or how they are selected or obtained were simply presented to explain
30 the definition of biometric portions.

Independent claims 1, 5, 15, 16, 20, and 21 require a plurality of biometric portions, wherein one or more of said plurality of biometric portions identifies or verifies said user. Independent claims 7, 11, 12, 17-19, and 22-24 require wherein said data comprises one or more biometric portions, wherein one or more of said one or more
35 biometric portions identifies or verifies a user.

Thus, DeSchrijver, Pare, Jr., et al., and Barrett et al., alone or in combination, do not disclose or suggest wherein one or more of said plurality of biometric portions identifies or verifies said user, as required by independent claims 1, 5, 15, 16, 20, and 21, and do not disclose or suggest wherein said data comprises one or more biometric portions, wherein one or more of said one or more biometric portion identifies or verifies a user, as required by independent claims 7, 11, 12, 17-19, and 22-24.

Conclusion

The rejections of the cited claims under sections 102 and 103 in view of DeSchrijver, Pare, Jr., and Barrett et al., alone or in any combination, are therefore believed to be improper and should be withdrawn. The remaining rejected dependent claims are believed allowable for at least the reasons identified above with respect to the independent claims.

The attention of the Examiner and the Appeal Board to this matter is appreciated.

Respectfully,



Date: January 20, 2006

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APPENDIX

1. A method for transmitting biometric data in a network, comprising the steps of:

5 obtaining biometric information for a user;
 obtaining a plurality of biometric portions from said biometric information, wherein one or more of said plurality of biometric portions identifies or verifies said user; and
10 transmitting said biometric portions to a destination using a plurality of packets.

2. The method of claim 1, wherein said user is provided access to a requested device, service or facility if said received biometric portions match corresponding biometric prototype portions.

15 3. The method of claim 1, wherein said biometric information is a biometric image.

 4. The method of claim 1, wherein said biometric information includes
20 speech segments.

5. A method for receiving biometric data in a network, comprising the steps of:

 receiving a plurality of packets containing biometric portions
25 corresponding to a user, wherein one or more of said plurality of biometric portions identifies or verifies said user;

 determining if said received packets provide sufficient data for processing;
 and

 evaluating said received packets if said received packets provide sufficient
30 data for processing.

6. The method of claim 5, wherein said received packets contain data that has been interchanged from a plurality of original packets and wherein said method further comprising the step of integrating said received packets to generate said original packets.

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7. A method for transmitting data in a packet network, comprising the steps of:

obtaining at least two packets of data for transmission, wherein said data comprises one or more biometric portions, wherein one or more of said one or more biometric portions identifies or verifies a user;

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interchanging said data from said at least two packets to obtain at least two interchanged packets; and

transmitting said interchanged packets to a destination.

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8. The method of claim 7, wherein said interchanging step further comprises the steps of placing odd numbered frames from said at least two packets into a first interchanged packet and even numbered frames from said at least two packets into a second interchanged packet.

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9. The method of claim 7, wherein said interchanging step generates N interchanged packets and wherein said method further comprises the steps of placing every Nth frame in a given interchanged packet.

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10. The method of claim 7, wherein said packets of data include telephone data.

11. A method for receiving data in a packet network, comprising the steps of:

receiving a plurality of packets containing data that has been interchanged from a plurality of original packets, wherein said data comprises one or more biometric

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portions, wherein one or more of said one or more biometric portions identifies or verifies a user;

integrating said received packets to generate said original packets;

determining if said received packets provide sufficient data for processing;

5 and

processing said received packets if said received packets provide sufficient data for processing.

10 12. A method for transmitting data in a packet network, comprising the steps of:

obtaining frames of data for transmission, wherein said data comprises one or more biometric portions, wherein one or more of said one or more biometric portions identifies or verifies a user;

15 generating N interchanged packets by placing every Nth frame of data in a given interchanged packet; and

transmitting said interchanged packets to a destination.

20 13. The method of claim 12, wherein said frames of data includes biometric information.

14. The method of claim 12, wherein said frames of data includes voice data.

25 15. A system for transmitting biometric data in a network, comprising:
a memory that stores computer-readable code; and
a processor operatively coupled to said memory, said processor configured to implement said computer-readable code, said computer-readable code configured to:
obtain biometric information for a user;
obtain a plurality of biometric portions from said biometric information,
30 wherein one or more of said plurality of biometric portions identifies or verifies said user;
and

transmit said biometric portions to a destination using a plurality of packets.

16. A system for receiving biometric data in a network, comprising:
5 a memory that stores computer-readable code; and
a processor operatively coupled to said memory, said processor configured to implement said computer-readable code, said computer-readable code configured to:
receive a plurality of packets containing biometric portions corresponding to a user, wherein one or more of said plurality of biometric portions identifies or verifies
10 said user;
determine if said received packets provide sufficient data for processing;
and
evaluate said received packets if said received packets provide sufficient data for processing.

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17. A system for transmitting data in a packet network, comprising:
a memory that stores computer-readable code; and
a processor operatively coupled to said memory, said processor configured to implement said computer-readable code, said computer-readable code configured to:
20 obtain at least two packets of data for transmission, wherein said data comprises one or more biometric portions, wherein one or more of said one or more biometric portions identifies or verifies a user;
interchange said data from said at least two packets to obtain at least two interchanged packets; and
25 transmit said interchanged packets to a destination.

18. A system for receiving data in a packet network, comprising:
a memory that stores computer-readable code; and
a processor operatively coupled to said memory, said processor configured
30 to implement said computer-readable code, said computer-readable code configured to:

receive a plurality of packets containing data that has been interchanged from a plurality of original packets, wherein said data comprises one or more biometric portions, wherein one or more of said one or more biometric portions identifies or verifies a user;

5 integrate said received packets to generate said original packets;
 determine if said received packets provide sufficient data for processing;
and

 process said received packets if said received packets provide sufficient data for processing.

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19. A system for transmitting data in a packet network, comprising:

a memory that stores computer-readable code; and

a processor operatively coupled to said memory, said processor configured to implement said computer-readable code, said computer-readable code configured to:

15 obtain frames of data for transmission, wherein said data comprises one or more biometric portions, wherein one or more of said one or more biometric portions identifies or verifies a user;

 generate N interchanged packets by placing every Nth frame of data in a given interchanged packet; and

20 transmit said interchanged packets to a destination.

20. An article of manufacture for transmitting biometric data in a network, comprising:

25 a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:

a step to obtain biometric information for a user;

a step to obtain a plurality of biometric portions from said biometric information, wherein one or more of said plurality of biometric portions identifies or verifies said user; and

30 a step to transmit said biometric portions to a destination using a plurality of packets.

21. An article of manufacture for receiving biometric data in a network, comprising:

a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:

5 a step to receive a plurality of packets containing biometric portions corresponding to a user, wherein one or more of said plurality of biometric portions identifies or verifies said user;

a step to determine if said received packets provide sufficient data for processing; and

10 a step to evaluate said received packets if said received packets provide sufficient data for processing.

22. An article of manufacture for transmitting data in a packet network, comprising:

15 a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:

a step to obtain at least two packets of data for transmission, wherein said data comprises one or more biometric portions, wherein one or more of said one or more biometric portions identifies or verifies a user;

20 a step to interchange said data from said at least two packets to obtain at least two interchanged packets; and

a step to transmit said interchanged packets to a destination.

23. An article of manufacture for receiving data in a packet network, comprising:

25 a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:

a step to receive a plurality of packets containing data that has been interchanged from a plurality of original packets, wherein said data comprises one or more biometric portions, wherein one or more of said one or more biometric portions identifies or verifies a user;

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a step to integrate said received packets to generate said original packets;
a step to determine if said received packets provide sufficient data for
processing; and

5 a step to process said received packets if said received packets provide
sufficient data for processing.

24. An article of manufacture for transmitting data in a packet network,
comprising:

10 a computer readable medium having computer readable code means
embodied thereon, said computer readable program code means comprising:

a step to obtain frames of data for transmission, wherein said data
comprises one or more biometric portions, wherein one or more of said one or more
biometric portions identifies or verifies a user;

15 a step to generate N interchanged packets by placing every Nth frame of
data in a given interchanged packet; and

a step to transmit said interchanged packets to a destination.

EVIDENCE APPENDIX

There is no evidence submitted pursuant to § 1.130, 1.131, or 1.132 or entered by the Examiner and relied upon by appellant.

RELATED PROCEEDINGS APPENDIX

There are no known decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 CFR 41.37.